of the first quarter of 1996.[98] TCG and MCI Metro have completed their fiber buildouts in downtown San Francisco -- we know, because they encircle our headquarters. According to Bellcore, MCI has already installed 10 switches around the country.

While our competitors complain that there are thousands of LEC switches, that misses the point. These thousands of switches result from our obligation to serve all customers at averaged rates. In many circumstances they represent a burden, not a benefit. If competitors need collect only the best ten percent of our customers to take all our profit, as we know they do, then all other things being equal (which they are not -- LEC switches being far more likely than their competitors' switches to be antiquated), they need only ten percent of our switching capacity to take all our profits. Absent substantial changes to universal service burdens and obligations to serve, there will never be any reason for a competitor to install thousands of end office switches.[99]

The rational entrant will target its initial entry at the small share of customers who account for the large share of revenues. Those are the customers who are most likely

---

[98] Telecommunications Reports, Nov. 6, 1995, p. 1.

[99] The alternatives to our network are concentrated where demand is concentrated, and those are the areas where most cellular service is used. Our demand is not homogeneous. For a new entrant to compete away ten percent of our business, it does not have to compete away ten percent of our customers. The distribution of revenues for telecommunications service is highly concentrated: a small percentage of customers, lines, and geographic areas accounts for a very large share of the revenues in most service categories. 70% of Pacific Bell's access lines are located in the two major metropolitan areas of Los Angeles and San Francisco, and 85% of our toll revenues are located in just 6% of California's land mass. Pacific's top 62 wire centers, or 10% of the state's total, account for 40% of total revenues. The top 20% of wire centers account for 63% of total revenue. The bottom 50% of wire centers generate less than 7% of revenues. We have tariffed 86 wire centers for collocation at the request of our competitors. These 86 tariffed offices (12 percent of Pacific's wire centers) account for 45 percent of total switched access minutes, 74 percent of DS1s, and 88 percent of DS3s.

to receive calls from cellular phones which may be terminated either by us or by one of our competitors. MCI has already announced that it will begin local competition with the business market and then focus on the residential market.[100]

In a market with so many "local service providers," the issue of market power over terminating access is an issue of Mutual Compensation. Every provider needs to terminate calls to other providers. The Commission has pointed out that, where selections are made, the end user generally selects the local service provider, and thus the carrier terminating a call "has no choice regarding the local service provider whose facilities will be used for that purpose."[101] The Commission was concerned that this "dichotomy between the service provider selection process and the compensation process may inhibit competition and delay efficient pricing for access services."[102] Actually, this scenario suggests cooperation, not exploitation through uneconomic pricing. Providers need one another.[103] As one vice-president of AT&T acknowledged in 1993, the company "will have to have alliances of some sort with the companies that

---

[100] "MCI Widens Local Effort," New York Times, December 12, 1995, p. C5.

[101] Price Cap Performance Review for Local Exchange Carriers, CC Docket No. 94-1, Second Further Notice Of Proposed Rulemaking, Released September 20, 1995, para. 27.

[102] Id.

[103] If the loop conferred the kind of market power that our competitors claim it does, they ought to want to buy unbundled loops at almost any price. Unlike us, they can charge whatever the market would bear for terminating access. But that isn't happening. They have expressed an interest only in buying loops at today's below-cost retail price, a price originally set by state regulators, with assistance (through the separations process) from this Commission, to subsidize end user access. This gives them "the first shot at obtaining the business that is priced far above cost ... an equal shot at the overpriced markets without having to bear any of the costs that justify that overpricing." Alfred E. Kahn, "A Free Ticket to Rich Telecom Markets," Wall St. J., November 10, 1995, p. A15.

provide the last-mile access to the home."[104] On February 27, 1996, AT&T announced its "plan to negotiate terms under which it can offer local phone service in Ameritech Corp.'s five-state region."[105] MFS and Pacific Bell have already agreed on the terms of such compensation.

Development of LRIC

In the face of this explosion of both competition and cooperation in local exchange markets, regulators must allow economically rational pricing. As noted, LRIC, the added cost of producing an increment of service output, is universally recognized as the economically relevant cost for use in pricing,[106] especially for setting price floors.

The Commission states that "attempting to determine the LRIC of a specific service for a particular LEC is likely to raise significant practical and administrative problems."[107] Actually, we developed long run incremental cost numbers in CPUC proceedings in 1991-92, and have recently refined our cost numbers.[108]

Where problems arise in developing LRIC, they can be overcome by use of current cost as a reasonable proxy for prospective current cost. The costs caused by customer demand for LEC termination services are the costs that the LEC will incur to

---

[104] San Francisco Chronicle, June 7, 1993, at E7.

[105] "AT&T To Negotiate Local-Phone Service With Ameritech Corp.," Wall Street Journal, p. B12, February 28, 1996.

[106] See A.E. Kahn, The Economics of Regulation, Vol. 1 at 66 (MIT Press 1988).

[107] NPRM, para. 48.

[108] Hausman Statement, para. 34.

satisfy an increment of demand in the long run, i.e., LRIC. In the case of terminating capacity, short run costs based on the existence of currently unused capacity are largely irrelevant. As demand for service grows, the LRIC of serving that demand is the cost of constructing new capacity. Thus, the current cost of added capacity is a reasonable proxy for the LRIC of satisfying the capacity demand caused by CMRS providers' demand for termination of their customers' calls.

Recovering Costs In Excess Of LRIC

The Commission has long recognized that the LECs' LRICs are relatively low and are below average costs.[109] Because of the LECs' economies of scope and scale and relatively high shared and common costs, pricing all LEC services at LRIC would not permit them to recover their total costs and would put them out of business.[110] In the LEC Price Cap proceeding, the Commission recognized that the LECs should be allowed to recover their "total costs while minimizing adverse effects on consumer surplus -- the difference between the price of a good and what consumers would be

[109] See Price Caps Further Notice, 3 FCC Rcd at 3257; National Rural Telecom Ass'n v. FCC, 988 F.2d 174, 182 (D.C. Cir. 1993). Hausman Statement, para. 12, attached hereto as Exhibit B. See Tardiff and Emmerson, p. 4, attached hereto as Exhibit D.

[110] Id. We estimate that shared and common costs are approximately the same size as the combined LRICs of all our services.

willing to pay for that good."[111] The Court explained this inverse elasticity principle, or Ramsey pricing, as follows:

> The price increments over marginal cost are allocated in inverse proportion to the price elasticity of demand for the good or service, with the increments relatively high for services for which demand is inelastic, low for those for which demand is elastic. The upshot is to minimize the aggregate impact of the price increments on consumer demand and thereby maximize consumer surplus.... [A] firm can enhance its profits by increasing (as compared to fully distributed cost pricing) the proportion of shared costs borne by the inelastic services: the effect of the decrease in sales there will (up to a point) be more than offset by the effect of the increase in sales due to corresponding price decreases for the price-elastic service. The same price changes increase consumer surplus as well.[112]

This Ramsey pricing is the best approach of those discussed by the Commission in the NPRM for allowing the carriers the opportunity to recover total costs, while increasing consumer surplus.[113] Ramsey pricing principles are desirable in markets where competition is developing. In fact, Ramsey pricing helps ensure reasonable rates for, and brings competition to, those customers who have the fewest alternatives. Ramsey pricing allows the carrier to price based on demand for services, ensuring that the carrier will not be forced to price so low as to keep competitors out, while giving the carrier the incentive to avoid pricing so high as to unreasonably encourage new competitors and drive the carrier's customers away from it.

---

[111] Id.
[112] Id.
[113] NPRM, paras. 50-54.

Tardiff and Emmerson explain the role of LRIC in this pricing model as follows:

> [W]ith imperfect competition, incremental cost defines the *minimum* price level. Prices themselves will typically be above the minimum, with more price elastic services being closer to the minimum than services that are less elastic. A regulatory regime designed to emulate this competitive outcome would use incremental costs to establish *price floors*, not set prices. LECs would then be free to price at or above these floors depending on the market conditions they faced.[114]

Another advantage of allowing Ramsey pricing is that the Commission uses it via price cap regulation for LEC access services. Pricing of interconnection and access must be allowed to follow the same pricing principles. This will avoid the creation of uneconomic arbitrage opportunities that encourage parties to use certain types of facilities or service arrangements based on regulatory classifications rather than economic efficiencies.

Economic efficiency would not be encouraged, and the large amount of LEC shared and common costs could not be recovered, by the Commission's suggested approach concerning the recovery of all shared and common costs from non-interconnection services. That approach would "allow carriers to set LEC-to-CMRS interconnection rates equal to the LRIC of the individual services associated with interconnection, and to recover common costs by having the rates for other services, such as vertical calling features (e.g., call waiting, call forwarding, or caller ID), exceed LRIC."[115] Vertical calling features and many other services are discretionary services.

---

[114] Tardiff and Emmerson, p. 5.

[115] See NPRM, para. 50.

If their prices are loaded up with shared and common costs that normally would be recovered from interconnection, customers may well decline to purchase them. This approach would discourage the development and use of innovative new services. Moreover, the customer who purchases a vertical feature may not be using or benefiting from the interconnection services in question. Without a cost-causal relationship, there is no rationale basis to saddle these customers with all these costs.

The fully distributed cost ("FDC") approach, which the Commission also suggests as an alternative in the NPRM,[116] would be a giant step backward, away from economic efficiency. In the Price Cap proceeding, the Commission correctly explained that prices based on separated FDC do not "maximize consumer welfare," but instead may "encourage underutilization of productive resources and impair competition on the basis of relative efficiency." The Commission recognized that restricting prices for competitive services to FDC creates a price umbrella, which less efficient competitors can price under without fear of a competitive LEC price response.[117] Given the surge in competition that is taking place in all LEC markets, any movement backward toward FDC pricing would clearly be a huge error.

---

[116] NPRM, para. 52.

[117] Policies and Rules Concerning Rates for Dominant Carriers, CC Docket No. 87-313, Further Notice of Proposed Rulemaking, 3 FCC Rcd 3195, 3226 (1988). See Private Line Rate Structure and Volume Discount Practices, CC Docket No. 79-246, Report and Order, 97 FCC 2d 923, 945 (1984). See also MCI Communications Corp. v. Amer. Tel. & Tel. Co., 708 F.2d 1081, 1123 (7th Cir. 1983).

Practical Considerations Regarding Cost-Based Pricing

The Commission asked whether LEC-CMRS interconnection rates should be based on the new services test, in which services are priced to recover their direct cost plus a reasonable share of overhead loadings.[118] In addition, the Commission asked whether its interpretation of the new services test in the context of the Video Dialtone ("VDT") docket, in which services using shared plant are allocated a reasonable portion of such plant, is instructive in setting rates for LEC-CMRS interconnection.[119]

As the Commission noted, the new services test sets prices based on the cost of providing a particular service. We agree generally that interconnection rates should be based on a carrier's cost of providing interconnection, including shared and common costs. However, the new services test is not otherwise relevant here, because interconnection is not a new service. Moreover, the administrative delays we have faced in the VDT and other contexts convince us that the test is fraught with problems.

In the context of VDT, LECs had no historical costs upon which to base their VDT transport pricing, and therefore were allowed to set prices based on cost projections set forth in cost studies they filed with their VDT tariffs. As the Commission notes, however, this process "h[ad] the disadvantage, typically, of requiring contentious, and time-consuming administrative proceedings to resolve the complex issues raised by cost studies."[120] Indeed, due to administrative delay, Pacific Bell never reached the

---

[118] NPRM, para. 56.

[119] Id., citing Telephone Company-Cable Television Cross-Ownership Rules, Memorandum Opinion and Order on Reconsideration, 10 FCC Rcd 244, paras. 217-21 (1994) ("Video Dialtone Reconsideration Order").

[120] NPRM, para. 57.

stage at which it might file a VDT tariff, even though it initially sought Commission approval to deploy VDT in December 1993. Despite the fact that the Commission made clear throughout the history of the VDT docket that it would not resolve cost allocation issues until an individual LEC filed its tariffs, opponents of VDT in the cable industry created long delays at earlier stages of the administrative process with repeated and often frivolous arguments about cost allocation.

Therefore, we oppose any requirement for LEC-CMRS interconnection that would permit parties to create similar delays. As we explain below in Section II - B, we recommend a more efficient hybrid approach that allows LECs and CMRS providers to negotiate rates for interconnection, with limited tariffing of common price elements, and with regulatory intervention only where necessary to resolve disputes or roadblocks. Our recommendation is consistent with the requirements of the Telecommunications Act of 1996.

## 3 (A). PRICING PROPOSALS MUST BE REASONABLE FOR BOTH THE INTERIM PERIOD AND THE LONG TERM

### INTERIM PRICING PROPOSALS

The Commission seeks comments on the interim approach that it should adopt for LEC-to-CMRS interconnection. The Commission's consideration of immediate changes in its interconnection policy is untimely. The Commission proposes to usurp the LEC-CMRS interconnection negotiation process and the role of the states at the very time that Congress has codified that process and the states' authority.[121] Moreover, the Commission's sole rationale for considering this action is "the possibility that LECs could use their market power to stymie the ability of CMRS providers to interconnect (and may have incentives to do so)." The Commission's concern about market power in this arena has come at the very time that local exchange interconnection markets are booming with new competitors.[122]

As we explained in our General Comments in Part I - D above, any interim approach will harm the public interest by disrupting existing arrangements that were negotiated in good faith and that involve not only charges between LECs and CMRS providers, but also charges to end users. These end user charges, in particular, cannot be revised quickly or without substantial expense. For these reasons, no interim

---

[121] We discuss this below in Section II - B.
[122] We described this in the preceding subsection.

approach, including Bill and Keep, would meet the Commission's goal of creating "minimal administrative burdens."[123]

The Commission defines Bill and Keep as follows:

> Under bill and keep arrangements, neither of the interconnecting networks charges the other network for terminating the traffic that originated on the other network, and hence the terminating compensation rate on a usage basis is zero. Instead, each network recovers from its own end-users the cost of both originating traffic delivered to the other network and terminating traffic received from the other network.[124]

Thus, by definition, Bill and Keep depends on end users for the recovery of costs that otherwise would be recovered from the interconnecting carrier. The Commission gives no indication of how or why these costs should be recovered from end users. As we discussed in Part I - D, because of the type of pricing requested by CMRS providers, we do not even recover the costs of "originating traffic delivered to the other network" from end users. Under 2A interconnection agreements, our end user subscribers can call a CMRS end user anywhere in the LATA as part of local flat-rate service. The Commission's proposal would require not only that we revise that pricing, but also somehow recover the costs of terminating traffic from our end users. The Commission offers no justification for placing all these costs on our end users, and it certainly could not be done simply or quickly.

---

[123] NPRM, paras. 59, 61.
[124] Id. at para. 60 (emphasis added).

Perhaps in recognition that Bill and Keep, as defined, would be unfair to end users and unworkable, the Commission sets forth three supposed "advantages" to the adoption of Bill and Keep that ignore end users and contain a number of other flaws:

> Bill and keep arrangements appear to have a number of advantages, especially as an interim solution. First, such arrangements are administratively simple and would require the development of no new billing or accounting systems. Second, the bill and keep approach prevents incumbent LECs that possess market power from charging excessively high interconnection rates. Third, according to proponents, a bill and keep approach is economically efficient if either of two conditions are met: (1) traffic is balanced in each direction, or (2) actual interconnection costs are so low that there is little difference between a cost-based rate and a zero rate. Proponents of bill and keep submit that condition (2) is satisfied in the case of LEC-CMRS interconnection because they allege that the average incremental cost of local termination on LEC networks is approximately 0.2 cents per minute.[125]

The first "advantage" of administrative simplicity is flawed precisely because end user charges would need to be changed. As we have described in Part I - D, contrary to the Commission's statement here, we would need to make changes in our recording and billing systems as well as numerous other changes. These changes would not be administratively simple for LECs or for the state commissions that would want to approve the changes in end user charges.

The second "advantage" (that, without Bill and Keep, LECs with market power may overprice interconnection) ignores the onrush of new local competitors that we

---

[125] Id. at para. 61.

described in the preceding subsection and ignores what the New York Times calls the "aerial assault on the wired nation:"

> Following the signing into law three weeks ago of the telecommunication reform bill, local and long-distance carriers and cable operators have focused on wireless networks as a means to enter each other's markets. Long-distance carriers in particular see wireless connections as a way to reach local phone markets without constructing extensive local network infrastructures. AT&T announced last month that it would invest $137.5 million in satellite broadcasting service Direct TV, while MCI soon after paid $682 million for satellite broadcast rights of its own. Last week, Sprint and its three cable partners renamed their venture Sprint Spectrum and shifted the focus of their alliance from wired services to wireless. The FCC auction of PCS licenses continues, with total bids reaching $7 billion as Feb. 23, and the alliance comprising AirTouch Communications, Bell Atlantic, Nynex, and US West has been a big part of the spectrum frenzy, paying $1.1 billion for its PCS licenses. Deloitte & Touche analyst David Roddy says the approximately $22 billion Americans spent on wireless services in 1995 should more than double by 2000.[126]

The third "advantage" (that under certain circumstances Bill and Keep may be "economically efficient") ignores the pricing principles that we discussed in the preceding section. Proponents of Bill and Keep say that it meets circumstances for economic efficiency when either "(1) traffic is balanced in each direction, or (2) actual interconnection costs are so low that there is little difference between a cost-based rate and a zero rate."[127] The proponents apparently concede, as they must, that traffic is

---

[126] "An Aerial Assault on the Wired Nation," New York Times, February 26, 1996.

[127] NPRM, para. 61.

not balanced in the case of LEC-to-CMRS interconnection.[128] However, they "submit, that condition (2) is satisfied in the case of LEC-CMRS interconnection, because they allege that the average incremental cost of local termination on LEC networks is approximately 0.2 cents per minutes."[129] The proponents base their opinion on Dr. Gerald Brock's analysis. Dr. Brock admits that the cost is much higher at the peak and estimates peak usage at 2.1 cents per minute.[130]

Gerald Brock's analysis is wrong; his estimates are too low. Our LRIC for terminating wireless service is in the range of 0.5 cent to 1.0 cent per minute, while peak costs for termination are approximately five times this amount. These LRIC estimates, of course, do not include shared and common costs that we must have the opportunity to recover.

Professor Hausman describes some of the flaws of Dr. Brock's analysis which result in too low an estimate for LRIC.[131] One major flaw is that Dr. Brock relies on the RAND study for LRICs of interconnection. Hausman explains why that reliance is misplaced:

> The RAND study stated explicitly (p. 1) that its goal was only to develop a correct cost methodology and to provide 'initial estimates'. These initial estimates are based on 1987 data which is now 9 years old and the RAND study notes the importance of continual technological change in the local network (p. 6). Indeed, the RAND study leaves out certain network components, e.g., increased fiber capacity and the associated electronics, in developing its methodological approach. The RAND study explicitly states it leaves out cost elements of the network

---

[128] Id.
[129] Id.
[130] Id. at n.78.
[131] Hausman Statement, paras. 29-34, Exhibit B hereto.

(Table 19, p. 75). For these reasons the RAND study was explicitly not used in the California Public Utility Commissions proceedings which took place in 1991-92 in which I helped develop long run incremental cost numbers for Pacific Bell.[132]

Dr. Hausman also explains that Dr. Brock is wrong to assume that the costs of interconnection are negligible compared to the costs of metering. He points out that to allow economic efficiency these cost comparisons must be made by the LEC, and that parties can negotiate the "least cost solution."[133]

Not only is Dr. Brock's analysis of incremental costs wrong, but he ignores other relevant costs. Dr. Brock does not consider any shared and common costs in his analysis. Bill and Keep would prevent LECs not only from recovering LRIC but also the shared and common costs that a firm must recover in order to stay in business.[134] If we are denied that recovery here, we will have to try to recover more of these costs from other services, placing upward pressure on rates for residential and other customers. In addition, denying us shared and common costs for interconnection here would expose our access rates, in which we would continue to recover shared and common costs, to uneconomic arbitrage schemes. Carriers would attempt to use our interconnection and avoid our access.

The Telecommunications Act of 1996 is consistent with these economic principles.[135] The new Act requires that incumbent LECs provide interconnection with

---

[132] Id. at para. 34.

[133] Id. at para. 33 and n.9.

[134] Hausman Statement, para. 12, attached hereto as Exhibit B. See Tardiff and Emmerson, p. 4, attached here as Exhibit D. See also the preceding subsection above.

[135] Section 252(d).

their networks for the transmission and routing of telephone exchange service and exchange access.[136] In addition, all telecommunications carriers must "establish reciprocal compensation for the transport and termination of telecommunications."[137] Our negotiated pricing is to be based on "the cost...of providing the interconnection" and "may include a reasonable profit," and "a reasonable approximation of the additional costs of terminating" calls that originate on the network facilities of the other carrier.[138] Thus, we are allowed the opportunity to recover our total costs of providing interconnection, including not only shared and common costs but also a reasonable profit, and including the additional costs of transport and termination. Therefore, even if Brock's analysis of incremental costs were correct, which it is not, Bill and Keep could not be justified based on his analysis, since it looks solely at incremental costs of LEC-to-CMRS interconnection. Thus, there is no justification for requiring a rate of zero for that interconnection. Again, the new Act supports our position. Under the new Act, no regulator can require Bill and Keep; it may be adopted only if parties voluntarily "waive" their right to mutual recovery.[139] Even then, Bill and Keep applies only to transport and termination charges and not to the LEC's right to recover interconnection charges.[140]

---

[136] Section 251(c)(2).
[137] Section 251(b)(5).
[138] Section 252(d).
[139] Section 252(d)(2)(B)(i).
[140] Section 252(d).

Bill And Keep Is Contrary To The Public Interest

We agree with the Commission's public interest goals:[141]

1) Rely on competition where possible, and replicate it when necessary, in order to maximize benefits of telecommunications for consumers and society.

2) Encourage the availability of functionally equivalent services at the same prices unless costs differ.

3) Encourage optimal levels of investment and innovation of new services and technologies.

4) Encourage the efficient entry of new firms.

5) Support universal service.

The Commission's Bill and Keep proposal is contrary to each of its goals.

1) Bill and Keep would discourage the development of a level playing field for competition

Bill and Keep would discourage the development of fair competition by giving CMRS providers an unfair advantage over wireline carriers. Because of the traffic flow imbalance that places most of the burden of terminating traffic on the wireline provider, giving away terminating interconnection strongly favors wireless providers over their wireline competitors. In order to avoid this unfair advantage and ensure the development of full wireline and wireless competition, each carrier should pay the cost of using the others' network.

---

[141] NPRM, paras. 4-5.

Bill and Keep would discourage competition between competitive local carriers ("CLCs") and LECs for the business of terminating CMRS access. CLCs would not have any incentive to provide the service. So long as LECs provided it, the Commission would be unlikely to take on the huge local enforcement task of ensuring that CLCs provide interconnection pursuant to Section 201(a) of the Communications Act.

2) Bill and Keep would require that functionally equivalent services be priced differently, without reference to their costs

Bill and Keep does not use costs to set prices -- it makes interconnection "free." This distorts both the offering and the making of choices. The LEC has been required to offer choices; i.e., Type 1 or Type 2A, and Type 2B interconnection.[142] With Bill and Keep, the CMRS provider has no incentive to make the least cost (most efficient) choice. In fact, the CMRS provider has the incentive to choose the most costly option because all options are priced at zero. The LEC, however, has the incentive to reduce the cost of all options by removing features. Thus, Bill and Keep leads to wasted resources and less variety of choices.[143]

Bill and Keep would undermine current offerings of telecommunications services by creating very attractive arbitrage opportunities. If a carrier must pay for terminating

---

[142] See generally The Need to Promote competition and Efficient Use of Spectrum for Radio Common Carrier Services, Memorandum Opinion and Order, aff'g Interconnection Order, 2 FCC Rcd 2910 (1987) (Commission adopted policy statement rather than specific rules because of existence of a variety of interconnection arrangements and system designs). Cf. CMRS Second Report, 9 FCC Rcd at 1498.

[143] Hausman Statement, paras. 16-17, attached hereto as Exhibit B.

access from a wireline network but not from a wireless network, the carrier is likely to make every attempt to classify the call as wireless and avoid paying what it is paying today.[144]

An historical problem in regulatory pricing has been subsidies caused by decisions that services should be priced below cost and subsidized by others that are priced above cost. Bill and Keep will create a new subsidy system, as the Commission works to reduce subsidies in other areas. It is bad economic policy to create a new subsidy system without any public interest rationale such as supporting universal service, education, or healthcare.[145]

3) Bill and Keep would discourage optimal levels of investment and the innovation of new services and technologies

Granting interconnection to the network owned and built by another without recognizing the cost of the particular interconnection that is sought, encourages minimum investment in interconnecting infrastructure, rather than efficient investment in infrastructure. That is, there is no incentive to build infrastructure that would produce lower overall costs when both firms are considered. This will result in sub-optimizing infrastructure investment and discouraging the innovation of new, more efficient services and technologies.

It takes a complete value chain to provide a service that is purchased by the customer. There are the infrastructure components of the value chain which require

---

[144] Id. at paras. 20-23.
[145] See id. at paras. 24-25.

significant investment. There are also customer contact and demand channel investment. In a Bill and Keep environment, there is literally no reward for building the backbone of a network. The only compensation comes from attracting and maintaining customers, since compensation comes entirely from one's own customers. Thus, selective traffic aggregation and resale flourish. Because any infrastructure and new features are available for use free of charge, there is no incentive to build the infrastructure, or to innovate new features and technologies for that infrastructure

This affect is known as "free riding."[146] With Bill and Keep, there is no economic incentive for a CMRS provider to build out parts of its network where it can free ride off LEC investment. Free riding inevitably leads to less investment, and consumers have fewer choices of new products and services.

4) Bill and Keep would encourage inefficient entry by new firms

Efficient deployment of resources is the cornerstone of a competitive, free market environment. Investment -- especially new investment -- should be encouraged where it is more efficient than investment currently in use. Allowing an entrant to escape the real costs of its entry encourages investment that is less efficient than that currently in use. If an entrant ignores the costs associated with the use of the incumbent's network, it will be making economically inefficient investments.[147]

[146] See id. at paras. 18-19.
[147] See id. at paras. 41-45.

Efficiency is maximized when competitors face the true costs of the other competitors. If some costs are hidden from them or ignored by them, they are discouraged from finding the places in the free market that they are more efficient or add value and instead seek out the places where they can arbitrage regulatory opportunity.

5) Bill and Keep would harm universal service

The prices that we charge for our interconnection services contribute to our recovery of shared and common costs. Loss of contribution would need to be made up.[148] If we must recover the shortfall from our other subscribers, their prices will go up even though they have not caused the relevant costs.

The spread of Bill and Keep to other types of interconnection would be very harmful to universal service. The sunk (or shared or common) costs of a network cannot be recovered solely from originating traffic in high-cost areas or where customers are unable or unwilling to pay higher prices. By pricing termination of traffic at zero, based on the incorrect assumption that marginal costs are near zero and ignoring sunk costs, Bill and Keep would encourage new entrants to build networks that serve only those customers who are less costly to serve or are more willing and able to pay higher prices for service. The incumbent LECs alone would have networks that serve the higher-cost and lower willingness-or-ability-to-pay customers. The new entrants would simply use the incumbent LECs' networks for terminating traffic to those

[148] Id. at para. 38.

customers. Without the right to collect revenue from the new entrants for terminating their traffic, new sources of funding would be needed to support service to these areas and customers.

### The Effect Of Bill And Keep On Traffic Flows

The Commission requested comments "on the effect of bill and keep on traffic flows between LEC and CMRS networks" and on whether this approach leads to more balanced traffic flows.[149]

Bill and Keep would exacerbate the imbalanced flow of traffic. If CMRS providers can terminate traffic on the LECs' networks for free, their incentive will be to send as much traffic as possible in that direction. Moreover, wireline providers with whom the CMRS providers have alliances will have uneconomic arbitrage incentives to terminate their wireline traffic via the CMRS providers' switches in order to gain free termination on the LECs' networks.[150]

## OTHER SEGMENTS OF THE LECs' NETWORKS

### Dedicated Transport

The Commission requested comments "on the tentative conclusion that when LECs provide the dedicated transmission facilities between CMRS MTSOs and LEC

---

[149] NPRM, para. 62.
[150] Hausman Statement, paras. 20-23.

networks, they should be able to recover the costs of those facilities from CMRS providers through appropriate dedicated transport rates found in their existing access tariffs."[151] For those services that CMRS providers order on an unbundled basis, we charge special access tariffed rates for the dedicated facilities. We should be allowed to continue that practice.

The wireless carriers negotiated contract arrangements that allowed them the choice of being billed separately for the facility or having it included in the price of usage. Much of this is based upon carriers' networks and their distance relationships to Pacific Bell's end office or tandem switches. The wireless carriers in California have always sought to have billing options that allowed them to select from a menu that could gain them the greatest cost savings. In our negotiations for Mutual Compensation, we intend to continue to provide options that meet CMRS providers' needs. In order to accomplish Mutual Compensation, however, costs will need to be recovered more in line with how they are incurred. As the Commission reforms its access charge rules, we hope that access and interconnection charges will be coordinated so that we are not charging different amounts for uneconomic reasons. These types of differences create uneconomic arbitrage, which prevents rational economic behavior and recovery of costs.

---

[151] NPRM, para. 64.

Tandem Switching And Common Transport

The Commission requested comments "on whether and how LECs should recover from CMRS providers the costs of tandem switching and common transport between tandem switches and end offices, in cases where such LEC-provided facilities are used."[152]

It is essential that LECs recover from CMRS providers the costs of tandem switching and common transport when they are used to complete a call. Most CMRS providers have chosen our 2A tandem interconnection. This option saves them the cost of building their own facilities to our end offices. Providing this benefit creates the substantial costs of using our tandem switching networks for network aggregation. We do not recover these costs via any other network charges, e.g., they are not recovered via charges for dedicated entrance facilities. The costs of tandem switching and common transport are usage sensitive, and we must continue to recover them from usage-based prices in order to have an opportunity to recover our costs.

OTHER "POTENTIAL ALTERNATIVES" FOR THE INTERIM PERIOD

The Commission requested comments "on other alternatives for the interim period."[153] We discuss those proposed alternatives below. For all the reasons we have discussed above in Part I - D and elsewhere, the only alternative that has potential on an interim basis is the Commission's alternative entitled "Existing Interconnection

---

[152] NPRM, para. 65.
[153] Id. at para. 66.

Arrangements Between LECs and Cellular Carriers."[154] Even that alternative is not needed and would reduce PCS providers' flexibility.

1) Off-Peak Bill And Keep

The Commission requested comments on "[w]hether a bill and keep approach should be limited to off-peak traffic, with charges assessed for peak-period traffic."[155] Since Bill and Keep represents a disastrous economic policy, anything that would limit that policy is better than pure Bill and Keep. As we have explained, however, we have substantial twenty-four-hour-a-day costs associated with terminating traffic that we must recover. Applying Bill and Keep at off-peak times, would jeopardize full recovery. It also would create the need for network and other changes that we have described and that cannot be made on an interim basis.[156]

2) Subset Of Access Charges

The Commission asks whether or not "the rates for LEC-CMRS interconnection could be based on a subset of the LECs' existing interstate access charges (or

---

[154] Id. at para. 70.

[155] Id. at para. 67.

[156] In response to the Commission's request for information on CMRS peak traffic periods (id.), we have the following information. Cellular's peak traffic periods generally coincide with commute hours, so there are both morning and evening peaks. These generally are around 7 a.m. and 5 p.m. PCS may eventually change this. If PCS service ultimately is provided primarily to the mass market, it may end up being used more during traditional residential times. Because of pricing plans, some PCS systems (e.g., Mercury One) experience a peak period around 7 p.m.